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A PLAN FOR A SMALL DAIRY HOUSE.

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Recent developments in dairying have caused a large demand for a dairy house which will fulfill sanitary requirements and at the same time be practical and inexpensive. For those who are striving to improve the quality of their products such a building is an absolute necessity. Milk which is poured or strained in the barn, or allowed to

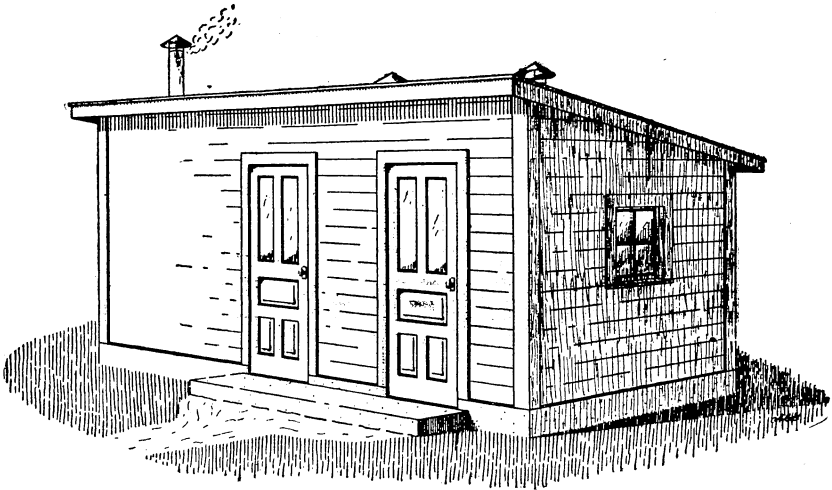


FIG. 1.—An inexpensive sanitary dairy house. Perspective view.

stand there, is liable to be contaminated by bacteria and to absorb stable odors. As soon as the cow's milk is drawn it should be carried to the dairy house, to be cooled immediately to 50° F. or lower. An up-to-date sanitary dairy house is provided with all the facilities for cooling milk in the most economical and expeditious manner

REQUIREMENTS FOR A DAIRY HOUSE.

For convenience the dairy house should be near the barn, yet so far from it that no barn odors can be detected in the house, and should be on well-drained land which slopes from the house.

The principal purpose in building a dairy house is to provide a place where dairy products may be handled apart from anything else. To carry out this idea it is necessary to divide the interior of the building so that the utensils do not have to be washed in the same room where the milk is handled. The idea of absolute cleanliness must always be kept in mind; therefore there should be no unnecessary ledges or rough surfaces on which dirt may lodge. Ventilators are necessary to keep the air in the milk room fresh and free from all odors and to carry steam away from the wash room. Windows are of great importance, as they admit sunlight and fresh air and facilitate work.

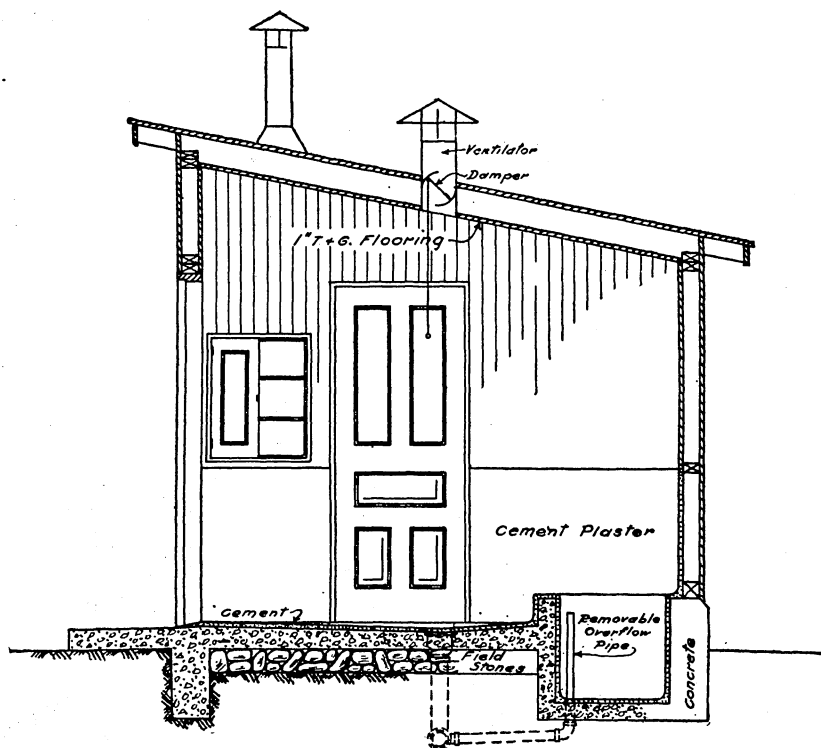


FIG. 2.—Cross section through dairy house.

In summer the doors and windows should be screened to exclude flies and other insects.

It is imperative that there be a plentiful supply of cold, running water at the dairy house. If it is not possible to have a regular water system, water may be piped from an elevated tank fed by an engine, windmill, hand pump, or hydraulic ram. The dairyman can ill afford to spend his time carrying water in a pail to cool milk and wash utensils.

For the proper sterilization of utensils an abundance of steam or hot water is needed. A pail or can may appear to be clean and still may contain numerous bacteria which will hasten the souring of milk, cause bad flavor in butter or cheese, or spread contagion. After the utensils are thoroughly cleaned they should be either scalded with boiling water or steamed.

The dairy house should be so built as to economize labor to the greatest extent. To do this the building must be arranged to avoid unnecessary steps.

It is not possible to submit a plan that will suit all conditions, but it is believed that the accompanying design will meet the needs of the average dairy that ships either milk or cream in cans. This plan is capable of considerable variation to adapt it to a wide sphere of usefulness. For larger dairies the same arrangement may be used on a larger scale, each room being made of greater size.

OUTLINE OF CONSTRUCTION AND EQUIPMENT.

The building illustrated herewith (see fig. 1) is 20 feet long, 10 feet wide, 8 feet 6 inches high in the front, 6 feet 6 inches in the rear, and has a shed roof. The exterior of the building may be covered with

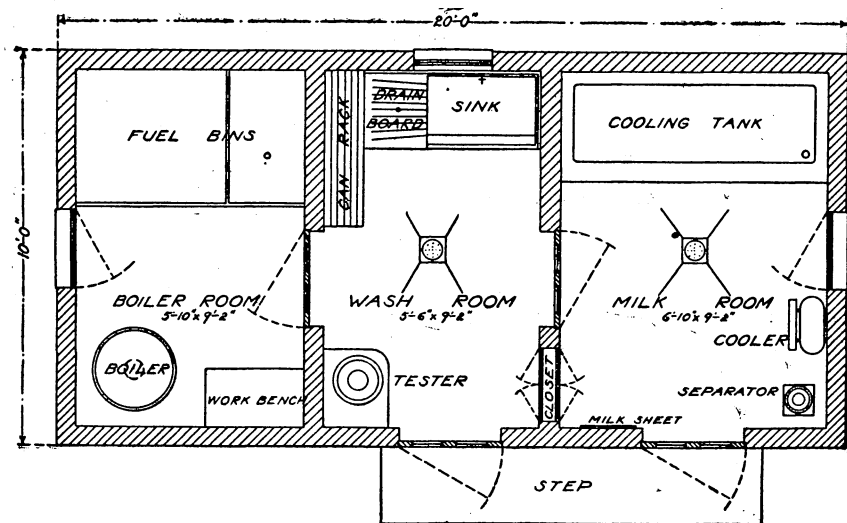


FIG. 3.—Floor plan of dairy house, showing general arrangement.

sheathing and building paper or with weatherboarding and shingles, the deciding factors being expense, durability, and appearance. The interior, however, should be carefully finished, so that the walls and ceiling may be smooth and free from corners or projections on which dust or dirt may accumulate.

The building should have a good concrete floor (see fig. 2), pitched to drain through bell traps. The side walls as high as the window should be plastered with cement on metal lathing. The remainder of the walls and ceiling may be covered with matched boards and then painted with a white, washable, enamel paint. Ventilating flues should extend through the roof from the ceilings of the cooling room and wash room. The windows should be hinged, as shown in the drawings (see fig. 3), and set to be flush with the inside wall when they are closed.

The equipment of the dairy house consists of a $1\frac{1}{2}$ to 2 horsepower vertical boiler which supplies steam to the sink and to the steam jet in the drain board, a galvanized-iron wash sink, a can rack, a Babcock tester, a concrete cooling tank, a milk cooler, and milk scales. A separator may also be located in the milk room.

ROUTINE WORK IN THE DAIRY HOUSE.

After each cow's milk is drawn it should be carried to the milk room, weighed, recorded, sampled for the composite test, and strained. It is then run over the cooler, using cold running water for the first cooling. When a can is filled with milk from the cooler it is put into the cement tank, which should be filled with ice and water well up on the neck of the can, and the contents should be stirred frequently until thoroughly cooled. When the milk is not being stirred the cans should

always be kept covered, to prevent the entrance of dust, dirt, insects, etc. Never mix warm milk and cold milk or cream. The doors of the milk room should be kept shut except when necessary to pass in or out.

When all the milk is cooled, the cooler, pails, strainers, etc., can be carried into the wash room, where they should be rinsed in cold water and then washed with hot water and washing powder. After this they are rinsed, steamed, and inverted on the drain board. For this purpose two pipes may be used, one carrying cold water, the other steam; these may be controlled by either hand or foot levers, or a single jet,

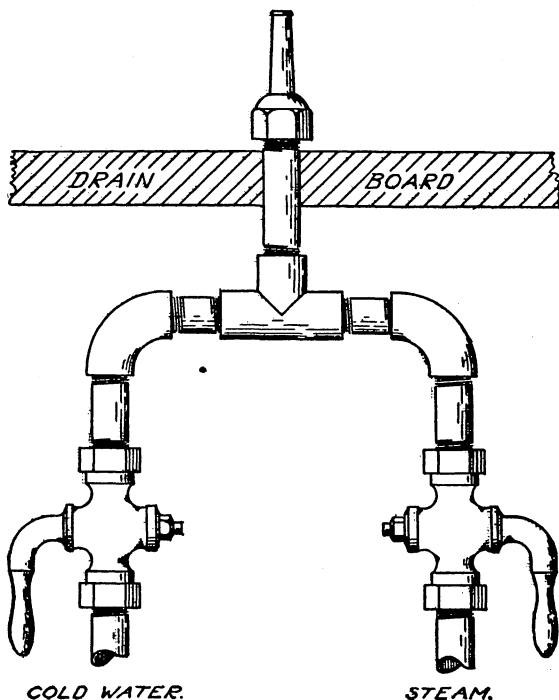


FIG. 4.—Detail of water and steam jet.

fed by both cold water and steam, may be installed. (See fig. 4.)

The little closet in the wall between the milk room and the wash-room is to hold bottles in which the composite milk samples may be kept. The closet can be opened from either room, so that the samples from the milk room may be placed in the bottles in the closet and when it is desired to test the milk they can be reached easily from the wash room; this arrangement makes it unnecessary to carry bottles from one room to the other.

Over the tester in the washroom a shelf may be placed for the purpose of keeping the glassware used in the Babcock test and the scales for weighing the samples of cream.